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ABSTRACT

The rationale, planning and implementing of this research is discussed in terms of its three hypotheses: (1) that both self desensitization and in vivo desensitization would result in lower Fear Index and Anxiety Differential scores of counselor trainees just prior to communicating with a role playing client in a counseling room where they are observed by their supervisors; (2) that in vivo desensitization would be more effective than self desensitization for reducing anxiety in the situation described; and (3) that both treatment groups would have higher performance scores on certain performance evaluation criteria than the control group. None of these hypotheses were supported. Possible explanations and data on subject variables are discussed. (TL)

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THE EFFECT OF SELF AND IN VIVO DESENSITIZATION ON COUNSELOR TRAINEE ANXIETY AND PERFORMANCE

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Several publications have dealt with anxiety experienced by therapists or students in therapy or counseling training programs as a result of their being observed, filmed, or recorded. Gysbers (1964) discusses this anxiety and reasons for it:

> Many beginning counselor candidates manifest feelings of anxiety at the thought of being placed in a supervised counseling interview for the first time. To them it seems to represent a new and psychologically threatening experience full of unknown and unfamiliar situations, one quite different from traditional didactic instruction where security was found in numbers, note taking, homework, and intellectualization.
>
> As many of these beginning candidates see it, being observed while conducting an interview reveals to those who are watching, general feelings of insecurity about functioning in a one-to-one helping relationship as well as specific feelings of insecurity with various counseling techniques and methods.

Lamb and Mahl (1956) correlated degree of disturbance felt by the therapist with other factors, and Carmichael (1956) describes a study in which he found that three therapists admitted to having felt initial anxiety about being filmed. He states, "They seemed to feel more vulnerable about the consequences..." when their performance is recorded. Anderson and Brown (1955) feel that tape recording poses a threat to the student, especially when the tape is used in supervision. Roulx (1969) used physiological measures of anxiety for counseling practicum students. He found that tape recording for supervisory purposes was anxiety producing, and that the amount of anxiety generated within the counselor seemed to

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be dependent upon the particular counselor-supervisor combination. Van Atta (1969) also stated that observation may be threatening for the therapist.

Observations of counselor trainee anxiety have also been made by instructors at Michigan State University. In accord with the development of a performance based training program, emphasis is placed on demonstration of counselor skills in all Masters level courses at Michigan State. This emphasis on counseling performance appears to be anxiety producing for a number of students. Symptoms of anxiety are frequently observed when trainees are role playing in laboratory rooms equipped with microphones and one way mirrors. Many of them display some or all of the following manifestations of anxiety: inability to maintain eye contact with the role playing client, rigid control of voice tone, strained and unnatural posture, tendency toward a question and answer format that does not allow silences, and difficulty in performing skills for a supervisor which trainees stated had been learned. Students have made appointments with instructors to discuss the "pressure" they felt they were under. It was the feeling of faculty, teaching assistants, and students that this anxiety interferes with counseling performance.

Assuming that detrimental anxiety was present in counselor trainees at Michigan State, the purpose of the present research was to compare the effects of two types of desensitization on anxiety associated with required performance demonstrations. It was expected that reduction of anxiety would result in improved student performance.

Desensitization was selected as the treatment because it is the most appropriate means of eliminating anxiety. A sizable number of studies have demonstrated the effectiveness of desensitization in reducing anxiety. Wolpe and Lazarus (1966), Bandura (1969), and Franks (1969) have reviewed these studies. In its standard form, the method has three main conponents. They are: (1) training the subject in deep muscular relaxation through the use of relaxation instructions, (2) construction of a hierarchy of anxiety producing situations,

and (3) the systematic presentation of the graded anxiety producing scenes to the relaxed subject through imagery until anxiety is no longer present. Through counter conditioning, anxiety is replaced by a feeling of relaxation in the actual situation.

Further, a number of recent studies (Migler and Wolpe, 1967; Kahn and Baker, 1968; Lang in Franks, 1968; Donner and Gurney, 1968; Cooke, 1966; Garfield, Darwin, Singer and McBrearty, 1967; Meyer and Gelder, 1963; and O'Neil and Howell, 1969) suggest that two variations of standard desensitization also lead to decreased anxiety. These two variations are self desensitization and in vivo desensitization. Self desensitization is the self application of the desensitization procedure. The procedure involves the use of a tape recorder and a prerecorded tape containing relaxation instructions and the presentation of hierarchy items by number. The hierarchy items are presented for preset time intervals with a relaxation period after each interval. In vivo desensitization involves the actual approach to the anxiety producing situation rather than through imagery. As in other types of desensitization, anxiety producing situations are arranged in a hierarchy graded from least to most threatening. With in vivo desensitization, however, the subject comes in physical contact with the various anxiety producing situations. The duration of these contacts is gradually increased. Each of these approaches is followed by relaxation in a neutral environment.

In summary, desensitization procedures have been proven to be effective in treating many types of neurotic anxiety. There is evidence to suggest that in vivo and self desensitization procedures would be equally effective in modifying counselor trainee anxiety.

Design and Procedures

Subjects were Master's degree students enrolled in procedures in counseling (24 subjects) and practicum (20 subjects) courses at Michigan State University, during spring term, 1970. They participated in the experiment as a part of the

course requirements. Subjects were randomly assigned to treatment groups. Thirteen subjects comprised the self-desensitization group, sixteen subjects participated in the in vivo group, and fifteen subjects comprised the control group. Twenty-two subjects were men and twenty-two subjects were women.

Three standardized measures were used to quantify the subjects' anxiety. They were the Taylor Manifest Anxiety Scale, the Fear Index, and the Anxiety Differential. The Taylor Manifest Anxiety Scale (Taylor, 1953) consists of fifty items which the subject indicates are or are not characteristic of him. Taylor's original research using the scale placed its reliability at .89. Extensive research using this scale has indicated it is a valid measure of anxiety; representative studies were done by Matarazzo, Guza, and Matarazzo (1955); Buss (1956); and Lebo, Toal, and Brick (1958).

The second device used to measure anxiety was the Specific Fear Index (Walk, 1956). It is a ten space continuum for self rating of anxiety developed in connection with military research on anxiety and performance. The validity of the Fear Index was determined through correlations between self ratings of fear/errors made in training performance. Reliability of the scale was shown in its high degree of correlation with responses to a direct question about being afraid and from correlation of high-fear ratings with physiological reactions.

The third measure used to quantify anxiety was the Anxiety Differential developed by Husak and Alexander (1963). It is similar to the Semantic Differential in that it consists of one word concepts with a seven interval continuum on which the subject rates the concept of a specified dimension. It is an emperical measure of anxiety, with each subject's score being the sum of the ratings on each concept. Husak and Alexander (1963) and Paul (1966) report studies using the Anxiety Differential.

Measures of anxiety were taken during the first class meeting as a pretest, before mention was made of the required performance demonstration. All instru-

ments were also given after the treatments had been administered and just prior to the communication task. In addition, the Anxiety Differential and the Specific Fear Index were administered alternately during the treatment period in an attempt to get a "desensitization curve."

During the first class meeting, and prior to the administration of the experimental treatments, all subjects recieved a one hour instructional unit on communicating the nature of counseling to a potential counselee. This task included discussing the purpose and focus of counseling, the roles of counselor and client, and the limits on the counseling process. A video demonstration tape, a brief lecture, and a handout were used in the instructional unit. The purpose of this instruction was to make possible the requirement of a performance demonstration of a specific counselor skill which was previously unfamiliar to the trainee. This communication task was selected for three reasons: because of its similarity to Paul's (1966) work with public speaking anxiety, because it is a required skill in the training program, and because it could be performed and rated in only three minutes.

The self desensitization subjects prepared individual twenty item fear hierarchies between the first and second class meetings. The hierarchy items consisted of anxiety producing situations associated with an observed counseling situation. These hierarchy items were ordered from least to most anxiety arousing. The experimenter provided individual assistance in completing or improving the hierarchy. During the second class meeting subjects began the treatment by individually using a relaxation training tape with instructions for relaxation read from Wolpe and Lazarus (1966). The second through the seventh treatments consisted of pairing the hierarchy items with relaxation using pre-recorded self desensitization tapes. Self desensitization tapes were prepared that paired three or four hierarchy items with relaxation. The tape first

instructed the subject to imagine the item for five seconds and then relax for thirty seconds. This was repeated two more times before the interval was lengthened to ten seconds. Three presentations of the item were made at this interval before it was extended to twenty seconds. The rationale for the length of the intervals was developed by Donner and Guerney (1969) who report that five seconds is too short a time for anxiety to build up. They stated that gradually raising the exposure items to twenty seconds with three repetitions at each interval effectively desensitizes subjects when the hierarchy includes many items. Each of the weekly tapes began with a few remarks of encouragement and appropriate comments as to the progress that was being made in the hierarchy, making the tapes about thirty minutes long.

The in vivo group desensitization subjects' first treatment session consisted of thirty-five minutes of relaxation training read to the group from Wolpe and Lazarus (1966). The second through the seventh treatment sessions were composed of in vivo group desensitization. The desensitization hierarchy consisted of actual approaches to the performance situation, graded both in fidelity of simulation and length of time the subject was exposed to each item of the hierarchy. The degree to which all of the anxiety producing cues of the counseling situation are present was gradually increased, with the subject exposing himself to the item by entering an interview room. The approaches to the communication situation progressed from entering an empty room, through neutral counseling situations with various cues added, to attempting to communicate with an uncooperative role playing client. The time spent in each situation was gradually increased in each from five to twenty seconds.

The control group members were given no treatments, but did engage in all regularly scheduled activities of their counseling classes.

After the desensitization treatments had been administered, all subjects were individually evaluated in their ability to communicate the nature of

counseling to potential counselees. This skill is considered by the department to be an essential one for the counselor because proper structuring of the counseling interview makes for more efficient use of counseling time. This performance demonstration was evaluated using a ten point behaviorally based performance scale. Credit of 0, 1, or 2 was given for the counselor trainee's ability to communicate the purpose of counseling, the roles of counselor and client, the focus of counseling, the limits on the counseling process, and an overall measure of non-verbal elements. Three students from a sophomore level undergraduate education class acted as role playing clients; the interaction was evaluated by advanced graduate students.

Three hypotheses were formulated: (1) It was hypothesized that both self desensitization and in vivo desensitization would result in lower Fear Index and Anxiety Differential scores of counselor trainees just prior to communicating the nature of counseling with a role playing client in a counseling room where they are observed through a one way mirror by a supervisor. (2) It was hypothesized that in vivo desensitization would be more effective in lowering Fear Index and Anxiety Differential scores of counselor trainees in the situation described. (3) It was hypothesized that both treatment groups would have higher performance scores on the performance evaluation criteria than the control group.

Results

Multivariate analysis of covariance was used for the statistical treatment of the data. This technique prevents the alpha level from being inflated when many dependent variables are used which are not independent of each other. Also, it permits the equating of subjects on a covariable in the statistical treatment of dependent variables. Taylor Manifest Anxiety Scale pretest scores were used as the covariable. The .05 level of significance was used.

Hypothesis 1 was not supported by the data. Means of the treatment groups on the dependent variables are given in Table 1. The control group had a slightly

lower mean score on the Fear Index and the Anxiety Differential than the treatment groups. Table 2 shows there were no significant differences between the groups on either the Fear Index or Anxiety Differential.

Hypothesis 2 was not supported, as there was no significant difference between the in vivo and self desensitization groups on either anxiety measure. Table 1 shows that on the Fear Index the in vivo desensitization group average was slightly lower than the self desensitization group, but that the reverse was the case for the Anxiety Differential. The test of significance in Table 2 indicates the differences were not significant.

Hypothesis 3 was not supported. The self desensitization group mean was slightly higher than the control group mean, while the in vivo group mean was lower than the control group mean. Table 1 shows these means, and Table 2 indicates the differences were not significant.

Because there was no effect on anxiety due to the desensitization treatments, mean anxiety levels of the groups over the eight weeks of the experiment were graphed. Figures 1 and 2 show no change in anxiety level through the eight weeks of the experiment. The pretest measures were administered during the first class meeting before the performance demonstration was discussed. The fact that the control subjects' anxiety level was the same just prior to the performance demonstration indicates that the subjects, as a group, did not feel increased anxiety about this experience.

The effects of other subject variables were also analyzed with treatments in two way multivariate analysis of covariance. The influence of counseling experience, defined as previous employment as a counselor, may be examined by referring to the cell means given in Table 3. Subjects who had been employed as counselors consistantly scored higher on the Anxiety Differential across all treatment groups, indicating greater anxiety just prior to the performance demonstration. The multivariate analysis of covariance did not show significant

differences between the treatment groups on the dependent variables as a group, but the univariate F test on the Anxiety Differential showed a probability level of .06 for the difference between counseling experience and no counseling experience. The multivariate and univariate analyses of covariance values are presented in Table 4.

Teaching experience was also examined as a subject variable. Table 5 shows that the subjects with teaching experience in the various treatment groups averaged 7.5 or above on the performance criterion. The mean of only one treatment group whose members had no teaching experience equaled 7.5. This trend in favor of teaching experience is reflected in Table 6, but neither the invariate analysis of variance for performance nor the multivariate analysis of covariance is significant.

Sex is analyzed in Table 7 where the means for males and females are given. When multivariate analysis of covariance was performed in Table 8, it was found that sex was not related to all the dependent variables taken as a group. However, the univariate F test of performance yielded the probability level of .06, suggesting that the trend toward higher performance of men than women might be investigated further.

Major of the experimental subjects, in counseling or other fields, was also included in the examination of subject variables. Table 9 shows that the performance criteria means for those majoring in counseling are somewhat higher across treatment groups than for those with other majors. The multivariate analysis of covariance and the univariate F for major shown in Table 10 did not reveal significant differences, though. However, the univariate F for the treatment by major interaction was significant at the .04 level for the Anxiety Differential.

Taylor pretest score was also used as a subject variable, in addition to being used as a covariable. Using the mean and median score of 12 as the cutting

TABLE 1

Means And Standard Deviations Of Counselor Trainee Post-Test Scores On The Fear Index, Anxiety Differential, And Performance Criterion[1,2]

Dependent Variable	T_1 Self Desensitization		T_2 In Vivo Desensitization		T_3 Control	
	M	SD	M	SD	M	SD
Fear Index	5.5	2.57	5.4	2.34	5.0	2.43
Anxiety Differential	62.5	18.49	66.0	10.95	59.0	11.83
Performance Criterion	7.5	2.23	7.4	1.67	7.3	2.34
Covariate						
Taylor Manifest Anxiety Scale	9.2	6.32	14.6	7.44	13.0	5.15

[1]The means in this table, and those in following tables, come directly from the scores of the subjects on the instruments and are unadjusted as to the Taylor Manifest Anxiety Scale covariate scores.

[2]The higher the score on the dependent variable or covariate, the greater the anxiety or the better the performance.

TABLE 2

Summary Table For Multivariate And Univariate
Analyses Of Covariance Of Treatments

		Treatment	
Multivariate	F	.3928	
	df	3 and 76	
	P Less	.89	
	Variable	**F**	**P Less Than**
Univariate	Performance	.0654	.94
	Fear Index	.1095	.90
	Anxiety Differential	.9246	.41

TABLE 3

Cell Size, Means, And Standard Deviations Of Treatment Groups According To Counseling Experience[1,2]

	T_1 Self Desensitization			T_2 In Vivo Desensitization			T_3 Control		
	N	M	SD	N	M	SD	N	M	SD
No Counseling Experience	10			12			11		
Fear Index		5.3	2.58		5.4	2.50		4.9	2.55
Anxiety Differential		59.1	18.73		65.6	11.27		55.7	11.56
Performance Criteria		7.2	2.10		7.4	1.83		7.5	2.42
Counseling Experience	3			4			4		
Fear Index		6.3	2.87		5.3	2.36		5.5	2.38
Anxiety Differential		74.0	14.73		67.5	11.36		68.0	7.75
Performance Criteria		8.7	1.53		7.4	1.26		7.5	2.36

[1]Counseling experience was defined as any employment as a counselor.

[2]The higher the score on the dependent variable the greater the anxiety or the better the performance.

TABLE 4

Summary Table For Multivariate And Univariate Analyses Of Covariance For Counseling Experience And Treatments

		Treatment	Counseling Experience	Treatment x C Experience
Multivariate	F	.4240	1.5304	.5385
	df	6 and 70	3 and 35	6 and 70
	P Less Than	.86	.22	.78

	Variable	F	P Less Than	F	P Less Than	F	P Less Than
Univariate	Performance	.1197	.89	.0241	.88	1.1855	.32
	Fear Index	.0920	.91	.2466	.62	.2703	.76
	Anxiety Differential	1.0303	.37	3.7771	.06	.5866	.56

TABLE 5

Cell Size, Means, And Standard Deviations Of Treatment Groups According To Teaching Experience[1,2]

	T_1 Self Desensitization			T_2 In Vivo Desensitization			T_3 Control		
	N	M	SD	N	M	SD	N	M	SD
No Teaching Experience	4			5			6		
Fear Index		5.8	2.63		5.0	2.83		4.5	2.66
Anxiety Differential		63.5	21.95		64.2	4.44		56.0	13.05
Performance Criteria		7.5	2.38		6.4	2.30		6.1	3.06
Teaching Experience	8			12			9		
Fear Index		5.1	2.70		5.4	2.30		5.9	1.50
Anxiety Differential		59.6	18.21		67.3	13.01		62.2	11.27
Performance Criteria		7.6	2.01		7.5	1.17		8.2	2.35

[1]Teaching experience is defined as any employment as a teacher.

[2]The higher the score on the dependent variable the greater the anxiety or the better the performance.

TABLE 6

Summary Table For Multivariate And Univariate Analyses Of Covariance For Teaching Experience And Treatments

		Treatment	Teaching Experience	Treatment x T Experience
Multivariate	F	.4128	1.2135	.3780
	df	6 and 70	3 and 35	6 and 70
	P Less Than	.86	.32	.89

	Variable	F	P Less Than	F	P Less Than	F	P Less Than
Univariate	Performance	.0010	.99	3.1987	.08	.5723	.57
	Fear Index	.0007	.99	.3348	.57	.4543	.58
	Anxiety Differential	.7401	.48	.3004	.59	.4220	.95

TABLE 7

Cell Size, Means, And Standard Deviations Of Treatment Groups According To Sex Of Subject[1]

	T_1 Self Desensitization			T_2 In Vivo Desensitization			T_3 Control		
	N	M	SD	N	M	SD	N	M	SD
Male	7			9			6		
Fear Index		5.1	2.67		5.7	2.24		5.5	2.81
Anxiety Differential		64.1	14.73		67.7	11.72		62.8	10.05
Performance Criteria		8.1	2.04		7.4	2.07		9.0	1.26
Female	6			7			9		
Fear Index		6.0	2.61		5.0	2.71		4.8	2.28
Anxiety Differential		60.1	23.40		64.0	10.36		56.4	12.78
Performance Criteria		6.8	1.94		7.2	1.11		6.1	2.20

[1]The higher the score on the dependent variable the greater the anxiety or the better the performance.

TABLE 8

Summary Table For Multivariate And Univariate Analyses Of Covariance For Sex And Treatments

		Treatment	Sex	Treatment x Sex
Multivariate	F	.3623	1.7857	.9010
	df	6 and 70	3 and 35	6 and 70
	P Less Than	.90	.17	.50

	Variable	F	P Less Than	F	P Less Than	F	P Less Than
Univariate	Performance	.0569	.94	3.6319	.06	2.4549	.10
	Fear Index	.1377	.87	.1117	.74	.4165	.66
	Anxiety Differential	.8737	.42	1.8957	.17	.0898	.91

TABLE 9

Cell Size, Means, And Standard Deviations Of Treatment Groups According To Major[1,2]

	T_1 Self Desensitization			T_2 In Vivo Desnesitization			T_3 Control		
	N	M	SD	N	M	SD	N	M	SD
Counseling	9			7			11		
Fear Index		4.9	2.45		5.8	2.04		5.5	2.34
Anxiety Differential		56.9	14.84		70.3	9.16		60.2	10.30
Performance Criteria		8.0	2.17		7.6	1.13		7.8	1.94
Non-Counseling	4			9			4		
Fear Index		7.0	1.92		5.0	2.69		3.6	2.50
Anxiety Differential		75.3	15.07		62.8	11.57		55.8	16.72
Performance Criteria		6.5	1.87		7.2	2.05		5.8	2.99

[1]Counseling majors were school counseling and rehabilitation counseling.

[2]The higher the score on the dependent variable the greater the anxiety or the better the performance.

TABLE 10

Summary Table For Multivariate And Univariate Analyses Of Covariance
For Major And Treatments

		Treatment		Major		Treatment x Major	
	F	.3919		.8368		1.6453	
Multivariate	df	6 and 70		3 and 35		6 and 70	
	P Less Than	.88		.48		.15	
	Variable	F	P Less Than	F	P Less Than	F	P Less Than
	Performance	.0349	.97	2.0851	.16	.6983	.50
Univariate	Fear Index	.1445	.86	.1540	.70	1.9782	.15
	Anxiety Differential	.9999	.37	.0092	.92	3.6697	.04

TABLE 11

Cell Size, Means, And Standard Deviations Of Treatment Groups According To Taylor Score[1,2]

	T_1 Self Desensitization			T_2 In Vivo Desensitization			T_3 Control		
	N	M	SD	N	M	SD	N	M	SD
Low Taylor Score	9			7			6		
Fear Index		5.7	2.65		5.3	2.26		4.8	2.71
Anxiety Differential		59.4	20.39		67.9	12.40		57.8	8.18
Performance Criteria		8.2	1.48		8.1	1.75		8.5	1.87
High Taylor Score	4			9			9		
Fear Index		5.3	2.75		5.4	2.64		5.2	2.39
Anxiety Differential		69.5	12.87		64.7	9.60		59.7	14.18
Performance Criteria		6.0	2.45		6.8	1.60		6.4	2.35

[1]A Low Taylor Score was one of 12 or below; a high score was one above 13.

[2]The higher the score on the dependent variable the greater the anxiety or the better the performance.

TABLE 12

Summary Table For Multivariate And Univariate Analysis Of Variance
For Taylor Scores And Treatments

		Treatment		Taylor		Treatment x Taylor	
	F	.4907		3.7601		.7689	
Multivariate	df	6 and 72		3 and 36		6 and 72	
	P Less Than	.81		.02		.60	
	Variable	F	P Less Than	F	P Less Than	F	P Less Than
	Performance	.0747	.93	10.0313	.003	.2106	.81
Univariate	Fear Index	.1256	.88	.0113	.92	.0809	.92
	Anxiety Differential	.9754	.39	.2433	.62	.7210	.49

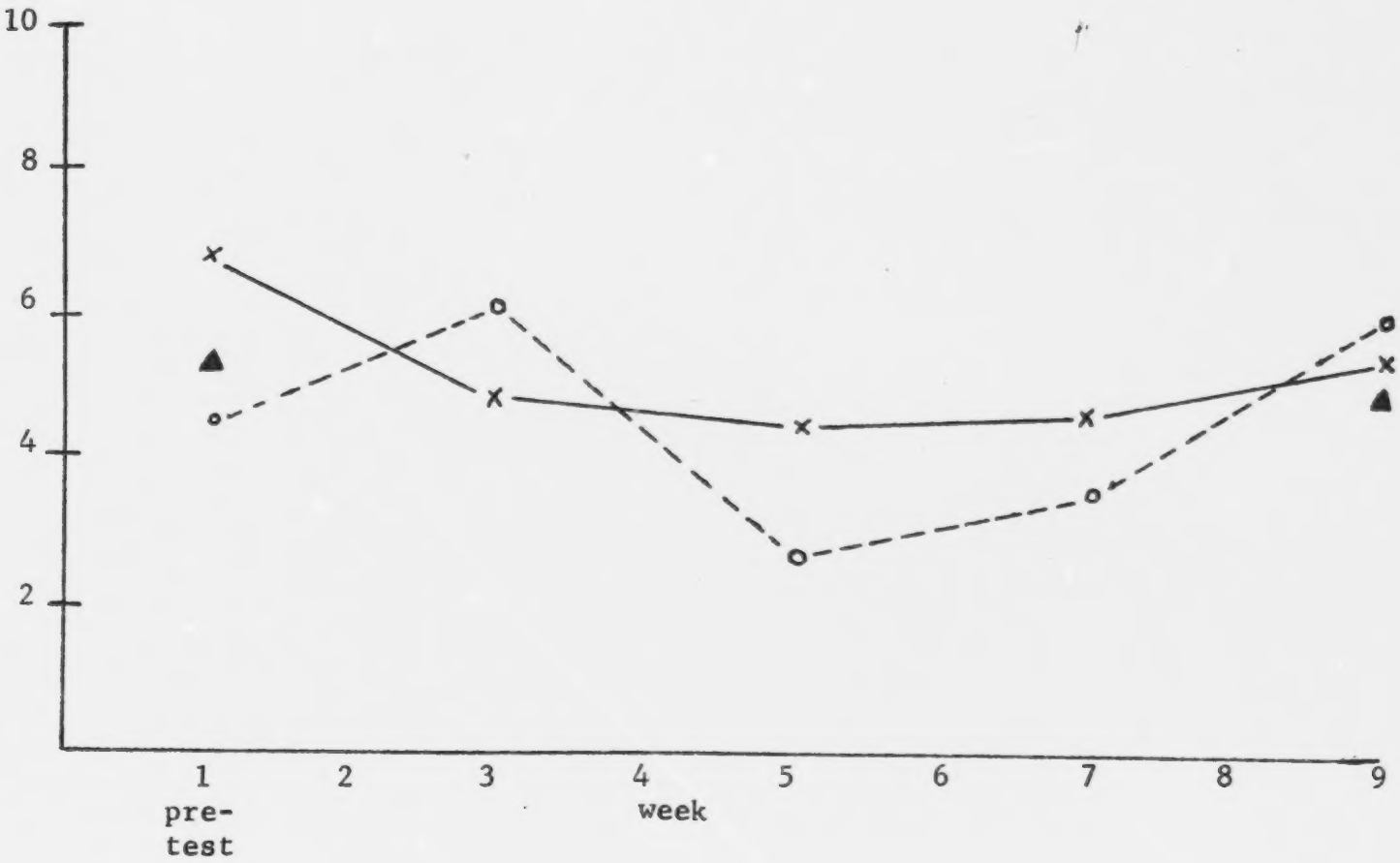

FIGURE 1

FEAR INDEX

• Self x In Vivo ▲ Control

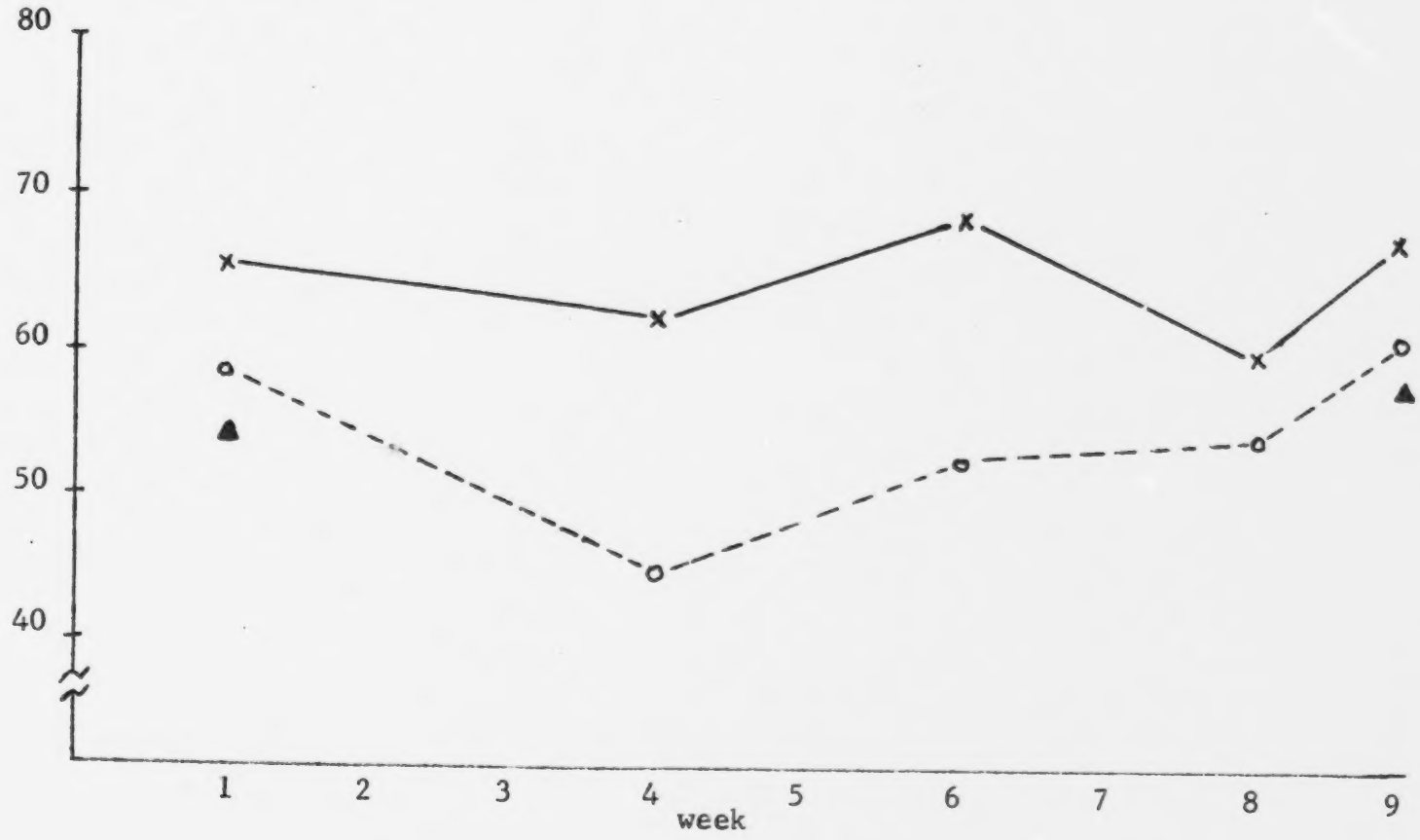

FIGURE 2

ANXIETY DIFFERENTIAL

o Self x In Vivo ▲ Control

point, it was found that the average for low Taylor subjects was two points higher than for the high Taylor subjects, as shown in Table 11. The multivariate analysis of variance was significant, with a probability of .02. The univariate F for performance was significant at the .003 level.

In summary, the hypotheses proposed in this study were not accepted. Subject variables were analyzed in relation to the dependent measures. The main finding in regard to subject variables was that anxiety as measured by the pretest Taylor score was related to the performance measure and that treatments interacted with major to affect Anxiety Differential scores.

Discussion

A discussion of this study might begin with a consideration of possible explanations for the lack of treatment effects. The possibility that desensitization is not an effective treatment for anxiety does not appear to be viable because of the large number of previous studies that have found desensitization to be effective.

A primary reason for the lack of treatment effect seems to have been the anxiety level of the subjects. Desensitization of anxiety presumes that an inappropriate level of anxiety is being experienced by the subject in connection with some situation. The planning of the present research assumed that subjects were anxious and that this anxiety was disruptive. However, Figures 1 and 2 indicate that the anxiety experienced by control subjects did not change throughout the experiment. Their anxiety was not noticeable different just prior to the performance demonstration than it had been eight weeks earlier. This observation, in addition to the fact that desensitization did not reduce treatment subjects' anxiety, suggests that the level of anxiety present in the subjects was not debilitating. A second indication that subjects were not unduly anxious is that the average pretest score on the Taylor Manifest Anxiety Scale was 12,

while the mean of twelve graduate students in a regular meeting of an occupational information class during summer term was over 15.

As discussed earlier, it had certainly been the shared impression of instructors and supervisors in the department that students anxiety was high in observed counseling simulations. Some of the more vocal students may have been moderately or highly anxious, but apparently the inference of instructors that practicum students were typically anxious was too generalized. The practicum students' lack of anxiety is therefore a meaningful finding of the study. Rather than viewing the students expressing anxiety as representatives of the group, these students are now seen as individuals expressing concerns which distinguish them from the rest of the group. The instructors response is now geared more to dealing with the anxiety on an individual basis rather than through group approaches or by modifications in the course.

Another possible factor which might have contributed to the lack of significant treatment effects has to do with the degree to which the subjects took the treatments seriously. Subjects may have viewed both the self and in vivo group desensitization treatments as games. Physical presence may not have meant full psychological participation. If such were the case, even those subjects who were moderately anxious would not have experienced a treatment that could be expected to reduce that anxiety.

The hierarchy items may have been a source of error in the experimental design. The self desensitization subjects may have not understood the concept or the importance of equal intervals in the hierarchy. Likewise, the in vivo hierarchy items may have elicited widely varying degrees of anxiety in the group members. Either situation would have caused transitions between some hierarchy items to be somewhat traumatic. The relaxation exercises would than not have been sufficient to counteract the anxiety created by some intervals. If this

were the case the relaxation exercise following some items would not have been sufficient to counteract the anxiety resulting from them. Such experiences would cause the anxiety to become more associated with the item rather than less.

In retrospect, three shortcomings of the study can be identified that provide plausible reasons for the lack of treatment effect. The indication that practicum students are in fact not nearly as anxious as had been thought is an explanation that provides useful information to practicum supervisors.

Other useful data resulting from the study had to do with subject variables. When the major of each subject was classified as counseling or non-counseling interaction between major and treatment was found on the Anxiety Differential. Subjects who were not majoring in counseling and who were also in the control group had the lowest mean scores on the Anxiety Differential. Subjects majoring in counseling who were in Treatment 1 had the next lowest mean score. Somewhat higher scores were made by subjects who were majoring in counseling and who were in the control group. Treatment 1 subjects not in counseling made the highest scores on the Anxiety Differential. It is difficult to suggest a simple reason for this complex interaction. Regarding the differential effect of self desensitization according to major, it could be postulated that counseling students were able to imagine the hierarchy items more realistically and vividly than those not majoring in counseling. This may have made self desensitization more effective with counseling students. Treatment 2 was more effective with non-counseling students than with counseling majors. This may have been because the actual contact with clients made more of an impression on these subjects. Non-counseling students in the control group may have been low in anxiety because they were uncommitted to professional development in this area, and did not care about supervisors' ratings.

Another significant relationship reflected by the data was that between Taylor MAS pretest scores and performance scores. Lower Taylor scores were associated with higher performance scores. This is congruent with the theory that anxiety interferes with performance. The Taylor Manifest Anxiety Scale is thought to be a measure of trait anxiety rather than situational anxiety. The highly significant relationship of Taylor scores to performance scores suggests that the general personality characteristics of a person are more an influence on his behavior than either the demands of this particular situation or treatments.

Implications for Further Research

There are definite implications for further research to be found in this study, including indications as to what improvement should be made in related designs. A basic issue emerges from this study regarding the choice of subjects. This study has demonstrated the difficulties inherent in attempting to apply an anxiety treatment to a group of subjects without screening for high anxiety levels. It appears that the application of desensitization procedures was not effective in reducing anxiety because the treatment was not appropriate for the subjects. Possible explanations given for the lack of treatment effect are that the subjects were not anxious or were not committed to participating in the desensitization treatments. In future research, subjects should be chosen for their anxiety in the counseling situation and for their willingness to participate in the desensitization process.

To verify or discount trends found in the present study, this research should be replicated with a design which provides for a reasonable number of subjects representing the various subject characteristics of counseling experience, teaching, sex, major, and Taylor scores. For example, a future study might have twenty subjects in each of the three groups divided evenly as to whether or not they had counseling experience, twenty more in each of the three groups divided

evenly as to whether or not they had teaching experience, and so on with sex, major, and high or low Taylor scores. Obviously, this would require a hundred or more subjects, but this would be necessary in order to keep from randomly recombining the same subjects while testing for different effects.

The performance demonstration of counselor skills in further research should be longer and more complex a task. Not only was the task that was used not anxiety arousing, but also it was not representative of the complex interpersonal interaction that characterizes counseling.

The repeated use of anxiety measures for an "anxiety curve" during the treatment period should be modified in future research. Mischel (1966) has argued that people have sterotyped views of themselves and, consequently, tend to give the same responses to paper and pencil tests over a period of time. This tendency may have been encouraged by the repeated use of these instruments during the experiment. A number of filler items should be used with the Anxiety Differential items to disguise the nature of that instrument.

Summary

This research examined the effects of self and in vivo desensitization with counselor trainees. The self desensitiaation procedure consisted of the individual use of pre-recorded tapes, while the in vivo treatment consisted of graded approaches to the anxiety producing situation. The treatments were not found to effect anxiety or performance, however. Possible explanations and data on subject variables were discussed.

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